

THE ASTRONOMERS



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September 2025

A word from your editor by
Sapavith 'Ort' Vanapruck

Inside this issue:

Bill is still off island. We have no guest speaker for September. Please prepare your photos to share.

The guest speaker, Claire Hu, from Dwarflab joined us a little late due to technical difficulty, but she was great. She did some sales pitch for Dwarf 3, but stayed around until the end of the general meeting to answer any questions our members had. Mahalo Claire.

The 2025 - 2026 school year is here, the request for a school star party has started to come in. There will also be other organizations like Boy Scouts or Girl Scouts requests come in also. Your involvement will help with bringing in more club memberships and promoting the club.

There was no school event in August. Pearl City Highland Elementary School changed their schedule from 8/29/2025 to later on this year. Girl Scout STEM Camp was a no go. They canceled the event. The only event we did beside the scheduled star parties was Bishop Museum's Star Tonight on Friday, 8/15/2025. There was only 1 group attending Star Tonight. 3 HAS members were there. Mars was the target of my telescope. Tom has his telescope on Al-bireo. Peter had his Origin setup and showed it to guests.

The weather for our two star parties was good. I did not have any report from the keymaster on Saturday, 8/16/2025, club party. Steve's report for the public star party on 8/23/2025 is "Last night was another clear

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Upcoming Events:

- The next Board meeting is Sun., Aug 31st 3:30 PM. (**Zoom Meeting**)
- The next meeting is on Tue., Sep 1st at the Bishop Museum at 7:30 PM. —**Hybrid (In person and Zoom) Meeting**
- Bishop Museum's planetarium show "Star Tonight" is every 3rd Friday, 9/19/2025, of the month at 6:00 PM & 7:30 PM

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President's Message September 2025

As astronomers, we are interested in phenomena we can observe, usually in the night sky. We may observe them visually or image them, but we want to see them. This month, however, I am going to discuss two astronomical phenomena that we didn't or won't see.

When I recently saw mention of an upcoming "Black Moon" I had to look it up. Apparently, the term has been in use for several decades, at least, but I don't recall ever hearing it before. It is the New Moon equivalent of the Full Moon we call a Blue Moon. Traditionally, this was the third of four such phenomena in a calendar season. This was mistakenly referred to as the second one in a calendar month in the press, and that quickly caught on in the public mind, so many people now use that definition. The recent one was a "third of four" one.

Like any New Moon, we don't observe it because it happens when the Moon is in conjunction with the Sun. It would be very risky to try finding the Moon through a telescope when it is so close to the Sun. So that's one we didn't see.

Until I looked up "Black Moon", I thought that might be referring to the total lunar eclipse coming up next month. You have probably noticed the tendency to label any total lunar eclipse as a "Blood Moon" these days. This label should probably be applied only after an eclipse since we aren't able to predict very precisely what color the Moon will appear during an eclipse as sunlight passes through all Earth's sunrise and sunset skies then.

This one may be darker than many because the Moon will pass fairly deeply through Earth's shadow. Our shadow is about three times the Moon's diameter as it passes through during an eclipse. Passages near the edge of the shadow are brighter and can show redder colors. This time the Moon will just graze the center of our shadow, so it won't be as dark as possible. I remember one during the '90s that was so dark that at mid-eclipse it was difficult to spot the Moon in the sky even knowing where to look. At any rate, this one happens during daytime in Hawaii when the Moon is not in our sky, so that's another one we won't see

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Observer’s Notebook—September 2025 by Ort

Planets Close to the Moon Times are Hawaii Standard Time

- Sep 8, 8h, Moon 3.5° NNW of Saturn; 167° from Sun in morning sky; magnitudes -12.5 and 0.6
- Sep 8, 11h, Moon 2.54° NNW of Neptune; 165° from Sun in morning sky; magnitudes -12.4 and 7.8
- Sep 12, 15h, Moon 5.3° N of Uranus; 109° from Sun in morning sky; magnitudes -10.8 and 5.7
- Sep 16, 3h, Moon 4.5° NNE of Jupiter; 63° from Sun in morning sky; magnitudes -9.0 and -2.1
- Sep 19, 3h, Moon 0.76° NE of Venus; 27° from Sun in morning sky; magnitudes -6.5 and -3.9
- Sep 22, 2h, Moon 2.55° SSW of Mercury; 8° and 7° from Sun in evening sky; magnitudes -4.6 and -1.0
- Sep 24, 2h, Moon 3.6° SSW of Mars; 30° from Sun in evening sky; magnitudes -6.7 and 1.6

Other Events of Interest Times are Hawaii Standard Time

- Sep 8, 8h, Moon, Saturn, and Neptune within circle of diameter 3.52°; about 166° from the Sun in the morning sky; magnitudes -12, 1, 8
- Sep 12, 13h, Moon 0.99° N of Pleiades; 110° from Sun in morning sky
- Sep 12, 14h, Moon, Uranus, and the Pleiades within circle of diameter 5.27°; about 109° from the Sun in the morning sky; magnitudes -11, 6, 3
- Sep 19, 3h, Moon, Venus, and Regulus within circle of diameter 1.18°; about 27° from the Sun in the morning sky; magnitudes -6, -4, 1
- Sep 26, 0h, Moon at apogee; distance 63.59 Earth-radii
- Sep 27, 9h, Moon 0.66° S of Antares; 66° and 65° from Sun in evening sky; magnitudes -8.9 and 1.0

Planets in September

 Mercury recently passed behind the Sun at superior solar conjunction. From Honolulu, it is not observable – it will reach its highest point in the sky during daytime and is 2° below the horizon at dusk.	 Venus remains just about visible as a morning object, now well past greatest elongation west and returning closer to the Sun. From Honolulu, it is visible in the dawn sky .	 Mars will soon pass behind the Sun at solar conjunction. From Honolulu, it is not observable – it will reach its highest point in the sky during daytime and is no higher than 13° above the horizon at dusk.
 Jupiter is currently emerging from behind the Sun. From Honolulu, it is visible in the dawn sky, rising at 01:38 (HST) and reaching an altitude of 58° above the eastern horizon before fading from view as dawn breaks at around 06:02.	 Saturn is currently approaching opposition. From Honolulu, it is visible in the morning sky, becoming accessible around 19:44, when it reaches an altitude of 10° above your eastern horizon.	 Uranus is currently emerging from behind the Sun. From Honolulu, it is visible in the morning sky, becoming accessible around 23:51, when it reaches an altitude of 21° above your eastern horizon.
 Neptune is currently approaching opposition. From Honolulu, it is visible between 20:33 and 05:20. It will become accessible at around 20:33, when it rises to an altitude of 21° above your eastern horizon.	 Pluto (Dwarf Planet) is visible in the evening sky, becoming accessible around 19:26 (HST), 38° above your south-eastern horizon, as dusk fades to darkness.	 4 Vesta (Asteroid) will become visible at around 19:26 (HST), 33° above your south-western horizon, as dusk fades to darkness.

Meeting Minutes

H.A.S. Secretary

August 5th 2025 7:30 PM (Bishop Museum Planetarium and Zoom Meeting)

Andy Stroble

President Chris Peterson called the meeting to order at 7:30, moved approval of the July meeting minutes, and the motion passed unanimously.

Leilani has agreed to step up as School Star Party Coordinator, so Pres. Chris moved to hold a special election at next month's meeting, Andy Seconded, motion passed unanimously.

Attending for the first time were Ed Siebert who found the website, Kari Johnson a former member, and Ed Lau who joined this month.

AstroNews Editor Ort reported on T-shirt progress, He also shared a video about Dwarf I to Dwarf III, and some one hour of stacking of M8.

Steven presented alternative pictures of M8, through a 71mm scope with reducer for a 5° x 3° FOV, and the Blue Horsehead Nebula. Peter displayed an image of S(uper)N(ova)2025rbs in the NGC 7331 galaxy, and ones of the Rho Ophiuchus area and M20, the Trifid Nebula. Shane showed images of the Lupi nova (V462) as well as SN 2025rbs, and the Helix Nebula. Andy shared a stack of the Antennae Galaxies.

Our Speaker, Claire from Dwarf Labs, joined us, but had no audio, so she re-installed zoom. While waiting for her to reconnect, Joanne shared adventures to the Grand Canyon, and other members filled in with more astrophotography, until Claire rejoined us at about 8:25.

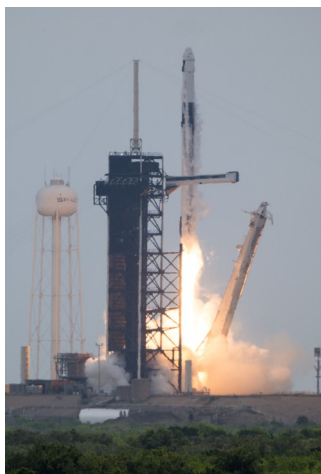
Claire shared some history of Dwarf Labs, from the early Dreamers to a Kickstarter program, and now the Dwarf 3. Photos of assembly were shown, and some discussion of scheduled strategy took place, with polar-alignment in equatorial mode, and Stellar Studio being of interest. Questions were asked about future developments, and the possibility of larger apertures.

After thanking out speaker, members shared more recent work: Hiroko a stack of the North American Nebula, with stars removed in post-processing by Stellar Studio, Ed the Eagle and Trifid Nebulae, using Dwarfs' Mega stacking to merge sessions, and John with pics of the California Nebula and Andromeda Galaxy.

Meeting adjourned at 9:04

There were some 27 people present in person, and at least 12 unique non-local logins on zoom.

Faithfully submitted,
James Andy Stroble, Secretary.
Honolulu, Hawaii



Crew-11 Launches to International Space Station

A rocket lifts off from the launchpad, leaving a trail of flames and plumes of vapor in its wake. A white structure and the black gantry can be seen on the left. On the right, a white arm falls away. The photo is taken from a distance.

Image credit: NASA/Aubrey Gemignani

Hawaiian Astronomical Society

Event Calendar

September 2025							Oct ▶
◀ Aug	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31		1 Labor Day	2	3	4	5	6
	BoD Meeting Zoom 3:30PM		General Meeting Bishop Planetarium Hybrid 7:30PM				
7	 Full 8:08AM	8	9	10	11 Patriot Day	12	13
							Public Party Dillingham Airfield Gate closes 7PM
14	 3rd Qtr 12:32AM	15	16	17	18	19	20
						Trivia Star Tonight Bishop Museum 6PM, 7:30PM	Club Party Dillingham Airfield Gate closes 7PM
21	 New 9:54AM	22 Start of Fall (Autumnal Equinox)	23	24	25	26	27
							Public Party Geigere / Kahala Sunset 6:21PM
28	29  1st Qtr 1:53PM	30	Notes:				

<<Upcoming Star Parties>>

Public Party-Dillingham September 13 — 6:45 PM
 Club Party Dillingham September 20 —6:45 PM
 Public Party Geiger/Kahala September 27 — 6:48 PM

Upcoming School Star Parties

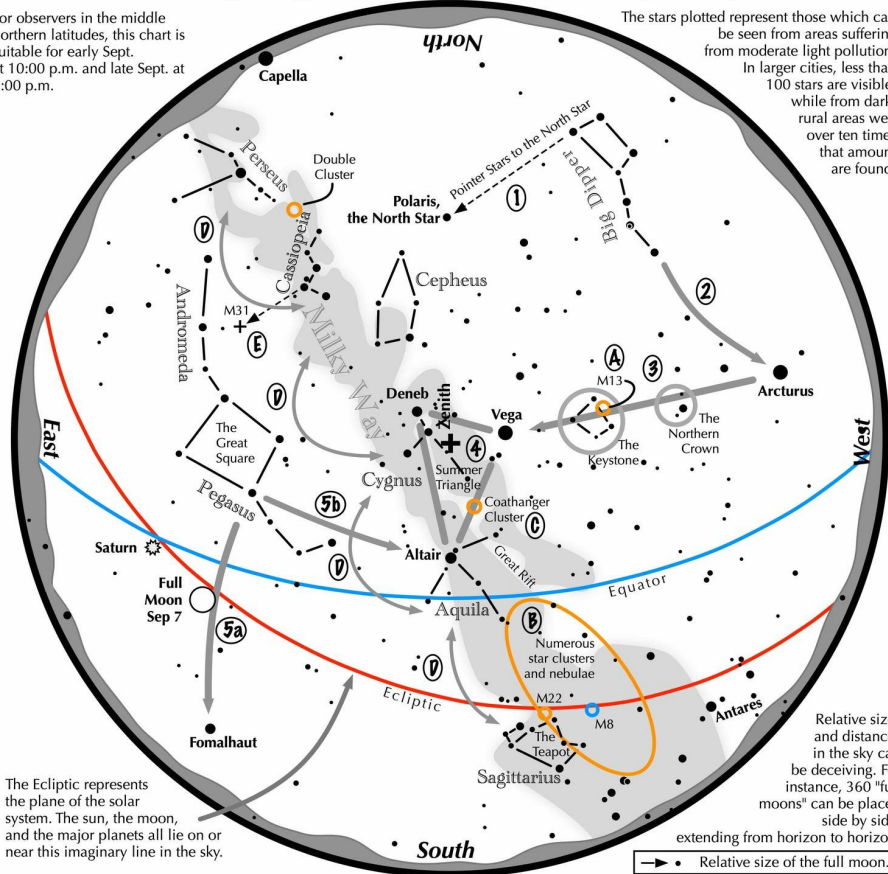
Date	Time	Location



Navigating the mid September Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Sept. at 10:00 p.m. and late Sept. at 9:00 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Navigating the mid September night sky: Simply start with what you know or with what you can easily find.

- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Follow the arc of the Dipper's handle. It intersects Arcturus, the brightest star in the September evening sky.
- 3 Nearly overhead shines a star of similar brightness as Arcturus, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 4 The stars of the summer triangle, Vega, Altair, and Deneb, shine overhead.
- 5 The westernmost two stars of the Great Square, which lies high in the east, point south to Fomalhaut. The southernmost two stars point west to Altair.

Binocular Highlights

- A: On the western side of the Keystone glows the Great Hercules Cluster.
- B: Between the bright stars Antares and Altair, hides an area containing many star clusters and nebulae.
- C: 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
- D: Sweep along the Milky Way for an astounding number of faint glows and dark bays, including the Great Rift.
- E: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.

Astronomical League www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.



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α -Aurigids (206 AUR) - are a minor meteor shower active from late August to early September, peaking around August 31 or September 1. Named for its radiant in the constellation Auriga, near the star Capella, the shower is the debris trail of Comet Kiess (Comet C/1911 N1 Kiess). The shower was discovered by C. Hoffmeister and A. Teichgraeber on August 31, 1935. While typically producing only a few meteors per hour, the shower is notable for its association with a comet dust trail that interacts with Earth's orbit only once or twice every 60 years, leading to occasional, dramatic outbursts of activity. This northern-hemisphere shower has produced outbursts with peak ZHRs of $\approx 30\text{--}50$ recorded in 1935, 1986, 1994 and 2019. Observations of the first predicted outburst in 2007 confirmed the calculated values widely and was characterised by many bright meteors. The peak ZHR of ≈ 130 lasted only for about 20 minutes. Slightly enhanced rates were also observed in 2021. According to calculations of Sato (2023) the assumed one-revolution dust trail was last in the vicinity of the Earth on 2022 September 01 at 01h UT ($\lambda_{\square} = 158.289$), but not close enough for detectable extra activity. For 2025 there is no exceptional activity expected. The Aurigid radiant reaches a useful elevation only after ≈ 01 h local time— this year with no moonlight interference.

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Radiant for the Alpha Aurigids. Credit: Starwalk and © Vito Technology, Inc..

Phases of the Moon (courtesy timeanddate.com)

First Quarter	Full Moon	Last Quarter	New Moon
September 29	September 7	September 14	September 21

Shower	Activity	Maximum		Radiant		V_{∞} km/s	r	ZHR
		Date	$\lambda_{\square}$	α	δ			
α -Aurigids (206 AUR)	Aug 28-Sep 05	Sep 01	158.6°	91°	+39°	66	2.5	6
Sept. ϵ -Perseids (208 SPE)	Sep 05–Sep 21	Sep 09	166.7°	48°	+40°	64	3.0	8
Dayt. Sextan-tids (221 DSX)	Sep 09-Oct 09	Sep 27	184.3°	156°	-02°	32	2.5	5

The α -Aurigids are a subtle but interesting shower worth checking out. For more info contact: Tom Giguere, 808 -782-1408, Thomas.giguere1@gmail.com.

Cash Flow - 7/10/2025 to 8/9/2025

Beginning Balance	\$9,502.22
Money into selected accounts comes from	
Donation	\$100.00
Membership - Electronic	\$100.00
Membership - Electronic - Student	\$12.00
Membership - Family	\$2.00
Membership - Paper	\$52.00
Total Money In	\$266.00
Money out of selected accounts goes to	
Total Money Out	0
Difference	\$266.00
Ending Balance	\$9,768.22

Here are the financials up through August 9. Thanks to everyone who donated, paid, or renewed.

The August Dillingham Star Parties were largely clear. Turnout was fairly large.

Covid wastewater Oahu figures remain at “very high,” continuing an increase begun since early to mid March. Our levels run several weeks later that last year’s record surge. Staff at Kaiser West Oahu report they are under a masking mandate. Yes, it’s bad.

Hang in there, and enjoy the sky.



Hubble Captures a Tarantula

This NASA/ESA Hubble Space Telescope image captures incredible details in the dusty clouds of a star-forming factory called the Tarantula Nebula. Most of the nebulae Hubble images are in our galaxy, but this nebula is in the Large Magellanic Cloud, a dwarf galaxy located about 160,000 light-years away in the constellations Dorado and Mensa.

Image credit: ESA/Hubble & NASA, C. Murray

Message From Your Vice President

September 2025

by Bill Barr

Sales of used equipment are suspended until late-summer. If there's something you're interested in, be sure to email and it will be held for you.

(Continued from page 6) *Astronomical League*

If you can see only one celestial event in the morning this September, see this one!

View to the east on September 19 60 minutes before sunrise

Crescent moon meets brilliant Venus and the star Regulus

On the morning of September 19, the crescent moon, full with earthshine, joins brilliant Venus and the brightest star in Leo, Regulus, for a dramatic sight. Look low in the east-northeast 60 minutes before sunrise.

Be sure to use binoculars to cleanly separate this celestial trio!

Above them all shines bright Jupiter, itself forming an attractive isosceles triangle with the twin stars of Gemini, Castor and Pollux. To their lower right shines the bright star Procyon.

View through binoculars

View through binoculars

Crescent Moon 9/19

Venus

Regulus



Moonlight and Our Atmosphere

The Moon's light is refracted by Earth's atmosphere in this April 13, 2025, photograph from the International Space Station as it orbited into a sunset 264 miles above the border between Bolivia and Brazil in South America.

Image credit: NASA

(Continued from page 1) - A word from your editor

evening. We had about 20 visitors and a dozen or so club members. It was a nice mixed bag of visual and astro imaging.”

There is no Monthly Night Sky Notes for September. I replaced it with Astronomical League Navigating the mid September Night Sky. AL posted this on Facebook.

Many members now use Electronically Assisted Astronomy (EAA) devices. So, if you are observing and able to capture any night sky object. You can share it in AstroNews by emailing it to me at astronews@hawastsoc.org with some detail. I will post it.



NASA’s SpaceX Crew-10 Splashes Down in Pacific Ocean

The members of NASA’s SpaceX Crew-10 mission – Roscosmos cosmonaut Kirill Peskov, left, NASA astronauts Nichole Ayers and Anne McClain, and JAXA (Japan Aerospace Exploration Agency) astronaut Takuya Onishi – are all smiles after having landed in the Pacific Ocean off the coast of San Diego, Calif., Saturday, Aug. 9, 2025. The crew spent seven months aboard the International Space Station.

Image credit: NASA/Keegan Barber



Viking 1 Begins Journey to Mars

A Titan-Centaur rocket carrying the Viking 1 spacecraft launches from Complex 41 at Cape Canaveral Air Force Station on Aug. 20, 1975. Viking 1 touched down on the red planet on July 20, 1976, becoming the first truly successful landing on Mars. Viking 1 was the first of a pair of complex deep space probes that were designed to reach Mars and to collect evidence on the possibility of life on Mars.

Image credit: NASA

(Continued from page 7) Editor Notes

In 2007, NASA Ames Research Center and SETI Institute organized an airborne observation campaign called the Aurigids Multi-instrument Aircraft Campaign (Aurigids MAC). This campaign was a collaboration of 24 scientists from different countries and lasted from August 30 to September 2. Visual, triangulation, and spectroscopic observation methods were used in this campaign. Although the peak failed to appear over Hawaii, the airborne campaign recorded an hourly rate of 40 meteors. Reports about hundreds of meteoroids were obtained in North America and Scandinavia



Perseids Meteor Shower

In this 30 second exposure photograph, a meteor streaks across the sky during the annual Perseid and Alpha Capricornids meteor showers, Sunday, Aug. 3, 2025, in Spruce Knob, West Virginia.

The Perseids meteor shower, which peaks in mid-August, is considered the best of the year. With swift and bright meteors, Perseids frequently leave long “wakes” of light and color behind them as they streak through Earth’s atmosphere. The Perseids are one of the most plentiful showers with about 50 to 100 meteors seen per hour.

This year, visibility will be hampered by an 84%-full Moon on the peak night. A few bright meteors may still be seen in the pre-dawn hours, but viewing conditions are not ideal.

Image credit: NASA/Bill Ingalls

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NASA's X-59 at Sunrise

NASA's X-59 quiet supersonic research aircraft is seen on the ramp at sunrise with its canopy open. Orange and gold light filters through the clouds behind the aircraft, highlighting the aircraft's shape. Several ground crew members are visible around the aircraft, along with support carts. A vertical light pole with a coiled cable can be seen in the foreground.